

## EXPERIENCE ↗

### Industrial Trainee

Brainstation 23

Jan 2023 - Feb 2023

Mirpur DOHS

- Got hands on training on C# and ASP.NET MVC through Brainstation 23's LMS. During the course, I completed one desktop application project and two web-based projects using ASP.NET .

### Capture The Flag (CTF)

TryHackMe

Mentor (Later Vice-President), MIST Cyber Security Club

- Certified for "Junior Penetration Tester" [link]
- Certified for "Attacking Active Windows Directory"[link|Badge].
- Became top 4 % on TryHackMe globally . [link]
- Mentor at MIST Cyber Security Club
- 24th place nationally as team lead.
- Achieved 79th place globally in Kaspersky codebreakers CTF.
- Global rank 97 at BlackHatMEA 2023 CTF Finals.[link]

## Stackoverflow ↗ | AskUbuntu ↗

Provided 4 solutions

- Solution links : [1](#) [2](#) [3](#) [4](#)

### Competitive programming

2020 - Present

- Solved over 250+ problems on GeeksForGeeks, Codeforces and Leetcode

## PROJECTS

### Software & Autonomous System Developer 2021 - ongoing

Mars Society's University Rover Challenge (URC)

USA

Anatolian Rover Challenge (ARC)

UKET,Turkey

- Developed an autonomous rover system using software & communication team for URC-2021 competition which became **champion globally beating 88 teams** in SAR and finally 36 teams in the final [Link](#).
- Developed an autonomous rover system with software & communication team for ARC-2022 competition which **became third among 14 final contestant countries** [Link](#)
- Software & Autonomous Team Lead For URC-2023, became 2nd in Asia in SAR stage.
- Software & Autonomous Team Lead For ARC-2023, became 2nd in Asia & 5th globally.

### Pretrained CNN-based Dog Classifier |Code|Certificate

Tech Stack Python,ResNET,VGG16, Machine Learning

### Bus Counter Management System Using JavaFX | Code

Tech Stack Swing, JavaFX, Java

### Military Communication Equipment Repair and Issuing of Spare Parts Management System | Code

Tech Stack Web Development, HTML, CSS, JS, PHP, OracleDB

### Simple weight machine using HX711 and Arduino | Code

Tech Stack Arduino, IOT, HX711 sensor

### SoccerBot

Tech Stack Arduino,C++

### DekhboKinbo | Code

Tech Stack C#, .NET Core MVC,Entity

### Alumni Information Management System | Code

Tech Stack C#, MySQL

### Blockchain-based Land Record management system with biometric authentication | Blockchain (Contract) | Website

Tech Stack Blockchain, Django, Arduino, IOT

### PyTorch-Create Your Own Classifier |Code|Certificate

Tech Stack Python, CNN, Machine Learning, AWS, Udacity

## RESEARCH & PUBLICATIONS ↗ | SCHOLAR ↗

- DeepTriNet: A Tri-Level Attention Based DeepLabv3+ Architecture for Semantic Segmentation of Satellite Images.[Link](#) [got the best paper award]
- Performance Analysis of Various EfficientNet Based U-Net++ Architecture for Automatic Building Extraction from High Resolution Satellite Images.[Link](#)
- CycleGAN-Based Data Augmentation with CNN and Vision Transformers (ViT) Models for Improved Maize Leaf Disease Classification.[Link](#)
- Biomolecular Analysis of Soil Samples and Rock Imagery for Tracing Evidence of Life Using a Mobile Robot [Accepted at ICRAIE - 2023]
- Enhancing Mango Leaf Disease Classification: ViT, BiT, and CNN-Based Models Evaluated on CycleGAN-Augmented Data [Accepted at ICCIT-2023]
- SecureLandChain: A Blockchain-Based Land Registry System with Biometric Authentication and Certificate Verification System [Submitted for a Q1]
- Automatic Literature Review Generation : An Improved LLM-RAG Based Solution Embedded With Regex and T5. [Thesis]

## EDUCATION ↗

### B.Sc in Computer Science and Engineering

2020 - 2024

Military Institute of Science and Technology

### Higher Secondary School Certificate

2017 - 2019

Barishal Cadet College

## SKILLS ↗

### Language

Python, C, C++, Git, L<sup>A</sup>T<sub>E</sub>X, C#, Bash,PHP, JavaScript, Matlab, SQL

### Frontend

HTML5, CSS, JS, Bootstrap

### Backend

Flask, Django, ASP.NET Core

### Database

MySQL, Firebase

### IOT & Robotics

Arduino, Raspberry PI, Jetson Nano & Xavier, LIDAR, ZED-Stereo Cam, ESP-32,PX4 (Pixhawk),ROS,ROS2,MAVROS

### App Development

### Soft Skills

Flutter, Dart  
English (business), Bengali (business), Public Speaking, Extempore Speech

### Pentesting Tools& OS

Burp Suite, NMap, Metasploit, SQLMap, Wireshark, Nessus, John The Ripper, Hashcat, Dirb, Volatility, Parrot OS,

### Other

Linux,PyTorch, TensorFlow,Git,Docker, MS Excel,MS Word,MS PowerPoint